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October 4th, 2018

Mr. John Niermann, Chairman, Texas Commission on Environmental Quality
Mr. Steve Dayton, Texas Commission on Environmental Quality
12100 Park 35 Circle
Austin, Texas 78753

Dear Mr. Dayton,

On behalf of the passenger-carrier transportation and transit industry, please find enclosed the following public comment in reference to the VW settlement and the due diligence that we have conducted on behalf of private operators of public transportation as well as public entities which provide public transportation.

With Warm Regards,

Barry Lewis, Chief Executive Officer
United States Transit Funding, Inc.

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Dear Mr. Niermann and Mr. Dayton –

I am submitting the following public comment for consideration in light of the completed due diligence in reference to newly found safety considerations based on correspondence from MCI, Proterra, New Flyer and BYD, Inc. as well as documentation and sourced references to commercial motor vehicle vendors who are seeking to utilize VW settlement funding including in the state of Texas.

Volkswagen violated certain Environmental Protection Agency (EPA) rules and regulations that led to the establishment of the VW Mitigation Fund to fund and cost allocate for the purchase of Class 8 Heavy Duty On Road equipment by companies that include private and public entities who provide passenger-carrier transportation and transit services within the state of Texas (Source: https://www.epa.gov/enforcement/volkswagen-clean-air-act-civil-settlement).

As a part of the Mitigation Settlement, it states "the funding for the Eligible Mitigation Actions provided for in the State Trust Agreement and the Indian Tribe Trust Agreement is intended to fully mitigate the total, lifetime excess NOx emissions from the Subject Vehicles where the Subject Vehicles were, are, or will be operated."

In order to operate a commercial motor vehicle that reduces diesel emissions, a manufacturer must deliver a commercial motor vehicle in accordance to United States Department of Transportation laws, rules and regulations.

A part of those laws, rules and regulations includes the requirement for commercial motor vehicles to adhere to Federal Motor Vehicle Safety Standards (FMVSS).

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According to the final FMVSS rule regarding electronic stability control, it states that the United States Department of Transportation expects "80 percent of new buses affected" by this rule in calendar year 2018.

Source: https://www.transportation.gov/sites/dot.gov/files/docs/FMVSS-136-Final-Rule-05182015-final.pdf

As a part of our due diligence, there was an indication that the MCI Commuter Coach product may be a part of an entities' strategic plan in order to reduce diesel emissions while meeting safety standards needed to operate inside and outside of an air mile radius, possibly for more inter-urban operations that would also be a funding match for a state beneficiaries' utilization of VW settlement funding.

Because of proprietary information that cannot be divulged publicly, United States Transit Funding, Inc. delved deeper into the meeting of federal safety standards needed for a commercial motor vehicle to operate on a public road so that a CMV unit can reduce diesel emissions in comparison to units that are meeting pre-2012 EPA guidelines.

Based on due diligence, we have learned that a series of manufactured commercial motor vehicle units are not meeting Electronic Stability Control requirements per independent testing results and verified by the National Highway Traffic Safety Administration (NHTSA).

In the last 12 months, we have learned that a Federal Motor Vehicle Safety Standard (FMVSS) directly related to passenger safety regulations went into effect. The new FMVSS requires that all Class 4 through Class 8 on-road commercial motor vehicles especially those that are

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marketing their products for passenger utilization in and outside of a 100-air mile radius is mandated to be equipped with electronic stability control technology as standard equipment.

Because of certain trade secret disclosure and knowing that Proterra has stated that it hold strategic plans to do as much business as possible through the VW settlement, it is clear that Proterra intends to nullify participation from other companies who meet FMVSS 136 even though they are not meeting this FMVSS mandate themselves.

Since Proterra's business strategy is varied from its competitors as well as VW settlement beneficiary interests, it is our continued view to provide information to decision makers and stakeholders, including the Trustee of the VW Settlement Fund, to help balance the ZEV (Zero Emission Vehicles) and Hybrid Vehicle (HV) cost-benefit analysis through examining the rate of diesel emission reductions, cost competitiveness as well as ensuring that safety standards are met.

It is our opinion that the Electronic Stability Control standard since it is a FMVSS mandate and therefore a United States Department of Transportation regulatory requirement that it should be considered a go/no go analysis for eligibility through the VW Settlement.

It is our recommendation and opinion that if a commercial motor vehicle is not meeting federal safety regulations and safety standards including but not limited to Electronic Stability Control (ESC) then it should not be eligible for VW settlement funding because without meeting federal safety regulations then they should not be able to transport a single passenger inside or outside of a 100-air mile radius and hence does not have the opportunity to reduce diesel emissions.

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Additionally, from a common safety practice, no unit should be permitted to transport passengers in adherence to the FAST Act regardless until independent, 3rd party testing indicates that a commercial motor vehicle is meeting federal safety rules, regulations and safety standards.

According to Proterra's website as well as 3rd Party testing results that the company has provided, here is just some of the information that continues to lead to the conclusion that its units do not have mandatory Electronic Traction Control outside of 4-wheel ABS.

Also, Proterra's units and their battery/electronic systems are not redundant-based with backup systems, hence the need for battery warranties priced over $50,000 per unit, leading to furthering concerns regarding the implementation of Electronic Stability Control and if there is a loss of battery power then both traction and stability control will be considerably mitigated.

Proterra states that it has "optional" traction control which clearly infers that it is not a mandatory requirements on their units as well. (Source: https://www.proterra.com/wp-content/uploads/2018/05/PROTERRA-40-FT-SPECS_4.30.18.pdf and https://www.proterra.com/wp-content/uploads/2018/05/PROTERRA-35-FT-SPECS_4.30.18.pdf)

| BRAKES & SUSPENSION | |
|---|---|
| Braking System | Regenerative braking; front & rear air disk brakes |
| Traction | 4-wheel ABS with optional traction control |
| Suspension | Multi-Link Air Ride rear suspension |

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To raise furthering concerns regarding Proterra and other competitors, there was an April 2018 accident involving New Flyer's own stability control issues where four were injured during a rollover incident during testing of which the event was, in part, due to the possibility where the potential of the battery placement being on the top of a bus was a considerable factor.

Additionally, Proterra has also announced that they are switching to SAE J3105 standards for overhead charging which may be translated to a change in the placement of battery packs within the chassis itself -

(Source: https://insideevs.com/four-injured-electric-bus-rollover-incident-during-testing/ and https://insideevs.com/proterra-switches-to-sae-j3105-standard-for-overhead-charging/).

As a part of the evaluation process, we have considered factors needed for public and private entities to participate in the VW Settlement and in order to achieve the following program outcomes:

(1) Reduce NOx and PM 2.5 diesel emissions
(2) Reduce fuel consumption based on either alternative technologies and/or clean diesel technologies
(3) Identify commercial motor vehicles that meet diesel emission goals set forth in accordance to the Clean Air Act as well as ensuring that commercial motor vehicles are meeting United States Department of Transportation (USDOT) public laws and safety standards
(4) Engage in business affairs meeting these goals on the basis that each commercial motor vehicle would be competitively procured in accordance to state and federal laws and regulations meet goals 1 through 3

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As a part of our due diligence process, we engaged one company that advised one of their products was not available due to not meeting a vital USDOT law – FMVSS 136. Because of the transparency provided, it prompted our company to ensure that each company being reviewed including mitigating safety-related considerations. USDOT has, in full legal and regulatory effect, implemented FMVSS 136 of which is designed to protect passenger and employee safety during the course of any mode of passenger-carrier transportation and transit service for Class 8 on-road commercial motor vehicles.

During the course of each due diligence process with each manufacturer of Class 8 on-road heavy duty passenger-carrier commercial motor vehicles, our company identified Proterra, BYD, and New Flyer, because of each companies' claims that their units are now designed to provide over-the-road and intercity transportation outside of the air mile radius of 100 miles of a garaging point.

Unlike BYD and New Flyer, Proterra, Inc. was engaged in public and private entities in so much that they were interested in selling their products so that their 35 and 40 foot Excelsior products were a part of a companies fleet through VW settlement funding and for the purpose of operating outside an air mile radius.

This was due to the benefits that Proterra was offering of which included a travel radius that exceeded 400 miles on a single battery charge. While that was of interest for both inter-urban passenger-carrier transportation as well as the possibility of identified intercity transportation in a

single state or across multiple state jurisdictions, our selection process was far more intricate in nature since there were both qualitative and quantitative measures that had to be considered.

Because of our due diligence approach, we utilized both a cost-benefit analysis through the EPA Diesel Emissions Quantifier (DEQ) as well as ensuring that commercial motor vehicle manufactured units was going to meet USDOT laws and regulations.

Based on Proterra's public documentation, its testing reports, as well as contact with the Office of Chief Counsel for USDOT's NHTSA, we had no choice but to view Proterra as well as BYD and New Flyer as ineligible to participate in the VW Settlement.

As a part of our due diligence review, we noted that Proterra was marketing itself as a manufacturer of commercial motor vehicles for passenger-carrier transportation since they were making claims that their 35 and 40 foot units are designed to travel outside of an air mile radius which removes the company to receive exemptions to be waived from USDOT regulations.

Since Proterra was moving its sales and marketing strategy to manufacture 35 and 40 foot commercial motor vehicles to perform outside of an air mile radius, we performed due diligence that considered safety-related impacts. What we found is troubling. In all of Proterra's technical specifications, it noted that the company has "optional" electronic traction control of which is related to the handling of a commercial motor vehicle.

Additionally, Proterra highlights the utilization of a lightweight carbon fiber chassis (source: https://www.proterra.com/technology/bus-body/) of which could mitigate the stability of a on-

road Class 8 bus during the performance of passenger-carrier transportation and transit services depending on certain performance factors, including acceleration.

As a part of our review, we also noted that Proterra made claims regarding speed acceleration where their 35 and 40 foot Catalyst products "have nearly twice the horsepower and acceleration" than a "standard diesel bus". (Source: https://www.proterra.com/press-release/proterra-introduces-the-duopower-drivetrain-for-its-catalyst-zero-emission-buses-at-apta/)

Also, we noted that there was no language regarding the ability to "govern" speeds of a Proterra unit in order to mitigate and eliminate speeding as a part of their product lines.

Finally, in light of what we learned regarding the need for each commercial motor vehicle manufacturer being required to meet USDOT laws and regulations, we had to visit the compliance issue in reference to FMVSS 136 – Electronic Stability Control. Based on all specifications for the 35 and 40-foot Proterra products, the company is not meeting this vital and required safety standard (Source: https://www.proterra.com/wp-content/uploads/2018/05/PROTERRA-40-FT-SPECS_4.30.18.pdf).

Additionally, we reviewed their 3rd party, independent testing reports (Source: http://altoonabustest.psu.edu/buses/404 and http://altoonabustest.psu.edu/buses/454) at the Altoona proving grounds. It is worth noting that Altoona is the leading proving ground in the United States of which its site is in the Commonwealth of Pennsylvania. Among the key elements within Proterra's report that we noted was "durability driving resulted in 'unscheduled maintenance and failures' that involved a variety of subsystems."

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Those failures that are detailed in the report led to a further conclusion that Proterra's units are not only not meeting FMVSS 136 based on the form and nature of the failures but could do harm to those that are riding a Proterra bus. Those failures that we noted include but are not limited to the following:

| **Sub-System Failure** | **Odometer Reading At Time Of Failure** |
|---|---|
| Broken Transmission Output Shaft | 13,977 test miles |
| Failed Electric Drive Motor | 15,000 test miles |
| Moisture in Battery Pack circuitry | 13,604 test miles |
| Failed Transmission | 9,284 test miles |
| Failed Traction Motor Resistor | 6,019 test miles |
| Failed Battery Pack | 3,644 test miles |
| Damaged Transmission Clutch Speed Sensor | 2,219 test miles |

Each of the aforementioned sub-system failures, while traveling on a public road, would lead to a mitigation of passenger-carrier transportation and transit safety as well as not having any electronic stability control even if this system was in place. Following the review of the Proterra Altoona report, we also noted the following observations:

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(1) In April 2018, there was a New Flyer bus that rolled over injuring three of which we had no choice but to further evaluate the safety considerations of a hybrid or electric commercial motor vehicle (Source: https://insideevs.com/four-injured-electric-bus-rollover-incident-during-testing/) of which required contact with the United States Department of Transportation regarding federal regulatory compliance on safety-related considerations, including FMVSS 136

(2) This is not the first time where a company like New Flyer has had its units pulled out of service due to safety-related considerations (Source: https://www.washingtonpost.com/news/dr-gridlock/wp/2017/10/04/after-metro-pulls-hybrid-buses-from-service-union-and-metro-offer-differing-accounts-of-the-issue/?noredirect=on&utm_term=.edd3288c93fe) which means if the units are not safe then they are also not going to reduce diesel emissions

(3) Based on the issues found in the Proterra Altoona reports as well as the New Flyer incident, we contacted the United States Department of Transportation and NHTSA to confirm which commercial motor vehicle manufacturers are meeting FMVSS 136.

We contacted the Office of Chief Counsel regarding Proterra, BYD and New Flyer meeting FMVSS 136 in light of the fact that the United States Department of Transportation stated that "80 percent" of all commercial motor vehicle manufacturers are going to be impacted by this final rule

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(Source: https://www.transportation.gov/mission/safety/final-rule-heavy-duty-vehicle-electronic-stability-control)

Since Proterra, New Flyer and BYD are marketing their products to include outside of the air mile radius as well as inter-urban transportation and transit service, each company is required to follow FMVSS 136 so that each participant of the VW settlement and the EPA DERA program is able to provide safe and effective passenger-carrier transportation.

Based on our contact with NHTSA, neither Proterra, BYD nor New Flyer is meeting FMVSS 136 regulations to date on any new bus that is going to be manufactured following the final rule.

Because of this fact, if a company cannot manufacture a commercial motor vehicle so that it is placed into service without violating FMVSS 136 then it logically cannot be on a public road and it cannot reduce diesel emissions.

Since Proterra is moving to the SAE J3105 standard for overhead charging stations, I can only offer the opinion that the new charging standard is now going to be similar to the New Flyer design for additional weight on top of a commercial motor vehicle.

Additionally, the CEO of New Flyer stated the following as well: "Preliminary findings suggests operator error as the likely cause of the accident and not the position of battery packs on the New Flyer bus. Blaming the positioning of batteries is irresponsible speculation, **and all North American electric bus manufacturers (New Flyer, BYD, Proterra and others) have provisions for some rooftop located batteries**. It is irresponsible for any party to suggest without evidence that an incident involving a test bus at New Flyer's facility has any relevance to battery location. All

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New Flyer buses on the road today meet or exceed all applicable motor vehicle regulations and safety standards."

The CEO of New Flyer and his statements leads me to two conclusions: (1) An engineering resign of battery placement leads to an increased manufacturing barrier leading to increased cost and delays in market rollout. (2) Proterra also have rooftop located batteries consistent with the SAE J3105 standard.

There is additional information which indicates that both Proterra and New Flyer have considerable barriers regarding the FMVSS mandate based on the J2735 Event Flags for passengers of which includes safety-related events such as ABS activation and stability control activation of which if Proterra offers "optional traction control" then it may lead to a degradation of any stability control as well as disseminating passenger-safety alerts during on-road transit.

To conclude – unless each commercial motor vehicle product designed to serve passengers is not meeting FMVSS 136 as well as safety-related impacts then it is mitigating the purpose of funding utilization through the VW settlement in any state including in Texas.

Many Thanks In Advance,

Barry Lewis
Chief Executive Officer
United States Transit Funding, Inc.